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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/495,751	02/01/2000	Paul Ignatius	044463.0020	5252

7590

11/05/2002

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EXAMINER

JACOBS, LASHONDA T

ART UNIT

PAPER NUMBER

2157

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/495,751

Applicant(s)

IGNATIUS ET AL.

Examiner

LaShonda T. Jacobs

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: note reference numeral 92 in Figure 2B, numerals 50D, 80D, 75 and 95 in Figure 4A, numeral 85 in Figure 4B. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: note reference numerals 90A and 90B in Figure 2B, numerals 20 and 30 in Figure 2C, numeral 82 in Figure 4B, numerals 75 and 80 in Figure 6, and numeral 60A in Figure 7. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: the last sentence on page 1 needs to be completed; there is no detail description of drawings 8-13, which should be listed on page 5; and there is too much spacing between the last two paragraphs on page 6.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yanai et al. (hereinafter, "Yanai", 5,544,347) in view of Crockett et al. (hereinafter, "Crockett", 5,619,644) and in further view of Ebrahim.

As per claim 1, Yanai discloses a data storage system having at least one storage device for storing a file, the data storage system comprising:

- a destination (see Fig. 1, col. 4, lines 25-30, and col. 6, lines 16-32); and
- a source, communicatively coupled to at least one storage device (see Fig. 1, col. 4, lines 9-20).

However, Yanai fails to explicitly disclose:

- a data mover.

However, the use and advantages for using a data mover is well known to one skilled in the relevant art at the time the invention was made as evidenced by the teachings of Crockett (see Fig. 1, col. 3, lines 38-49, col. 4, lines 3-8, and lines 17-22).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement a data mover in Yanai's system allowing data to be transferred at a high speed between a host and storage device.

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Although Yanai and Crockett show substantial features of the claimed invention, they fail to disclose:

- analyses the file to determine whether to send the file to the destination data mover in chunks.

However, Ebrahim discloses a system and method for processing PIO and DMA commands in which the host executes these commands to control the transfer of data chunks (see col. 1, lines 49-67, col. 2, lines 1-15, lines 38-48, and col. 7, lines 31-35). Therefore, Ebrahim at least implicitly discloses analyses the file to determine whether to send the file to the destination in chunks.

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement PIO and DMA commands in Yanai's in view of Crockett system allowing large blocks of reliable data to be transferred at a high speed between a host and storage device.

As per claim 2, Yanai discloses a data storage system having at least one storage device for storing a file, the data storage system comprising:

- a destination (see Fig. 1, col. 4, lines 25-30, and col. 6, lines 16-32); and
- a source, communicatively coupled to at least one storage device (see Fig. 1, col. 4, lines 9-20).

However, Yanai fails to explicitly disclose:

- a data mover.

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However, the use and advantages for using a data mover is well known to one skilled in the relevant art at the time the invention was made as evidenced by the teachings of Crockett (see Fig. 1, col. 3, lines 38-49, col. 4, lines 3-8, and lines 17-22).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement a data mover in Yanai's system allowing data to be transferred at a high speed between a host and storage device.

Although Yanai and Crockett show substantial features of the claimed invention, they fail to disclose:

- send the file to the destination in chunks along with header information instructing the destination data mover regarding the chunks.

However, Ebrahim discloses a system and method for processing PIO and DMA commands in which the host executes these commands to control the transfer of data chunks (see Fig. 7A, 7B, col. 13, lines 6-10, and col. 19, lines 35-53). Therefore, Ebrahim at least implicitly discloses send the file to the destination in chunks along with header information instructing the destination data mover regarding the chunks.

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate or implement PIO and DMA commands in Yanai's in view of Crockett system allowing large blocks of reliable data to be processed at a high speed between a host and storage device.

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 5,301,351 to Jippo.

U. S. Patent No. 5,682,513 to Candelaria.

U. S. Patent No. 4,296,465 to Lemak.

U. S. Patent No. 5,559,957 to Balk.

U. S. Patent No. 6,275,953 to Vahalia.

U.S. Patent No. 5,805,920 to Sprenkle et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 703-305-7494. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 703-308-7562. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

LaShonda T. Jacobs
Examiner
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ltj

October 29, 2002


ARJO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

CLAIMS

We claim:

1. A data storage system having at least one storage device for storing a file, the data storage system comprising:

a destination data mover; and

a source data mover, communicatively coupled to the at least one storage device, that

[analyses the file to determine whether to send the file to the destination data mover in chunks.]

2. A data storage system having at least one storage device for storing a file, the data storage system comprising:

a destination data mover; and

a source data mover, communicatively coupled to the at least one storage device, that

[sends the file to the destination data mover in chunks along with header information instructing the destination data mover regarding the chunks.]